
Wisconsin Legislative Council

INFORMATION MEMORANDUM



IM-2021-10

REGULATION OF SOLAR GENERATION FACILITIES

In recent years, Wisconsin has seen a substantial increase in the development of large solar generation facilities. These developments have prompted a range of public responses. While some commend the shift towards renewable sources of energy, others criticize the impact of these facilities on the agricultural landscape. Across the ideological spectrum, the growth in solar development has driven interest in Wisconsin's regulation of these facilities.

This information memorandum describes the regulation of solar generation facilities by the Public Service Commission (PSC) and the Department of Natural Resources (DNR). Additionally, it includes a flowchart outlining the project review process and highlights opportunities for public participation in project review. Finally, it discusses the authority of local governments to regulate solar facilities and provides an overview of facilities in various stages of development across the state.

PSC REVIEW OF LARGE GENERATION FACILITIES

Under Wisconsin law, no person may construct a large electric generation facility (i.e., a facility with capacity of 100 megawatts or greater) without first obtaining a certificate of public convenience and necessity (CPCN) from the PSC.¹ [[s. 196.491 \(3\) \(a\) 1., Stats.](#)] In reviewing a proposed facility, the PSC must make a range of determinations before granting a CPCN. For instance, the PSC must generally determine that the design and location of a facility are in the public interest considering alternative sources of supply, alternative locations, individual hardships, engineering, economic, safety, reliability, and environmental factors. The PSC must further determine that the proposed facility will not have undue adverse impact on ecological balance, public health and welfare, historic sites, geological formations, the aesthetics of land and water, and recreational use. The PSC must also find that a facility will not unreasonably interfere with the orderly land use and development of the area involved.² When approving a CPCN application, the PSC may impose conditions necessary to ensure that a proposed facility complies with the requirements specified under state law. [[s. 196.491 \(3\) \(e\), Stats.](#)]

Review Requirements for Wholesale Merchant Plants

While solar generation facilities may be developed by utilities, they are often constructed and operated by independent power producers (IPPs). IPPs, sometimes referred to as merchant generators, are entities that sell their electricity output at wholesale, rather than selling it directly to end-users. Wholesale electricity may be sold under long-term power purchase agreements with individual utilities, or in markets operated by the Midwest Independent System Operator. An IPP may also construct a generation facility and sell the facility itself to a utility.

Although all large generation facilities require a CPCN prior to construction, wholesale merchant plants are exempt from certain review requirements. Specifically, the PSC's review of

¹ Facilities with a capacity of less than 100 megawatts generally only require PSC approval if the facility is to be constructed by a public utility. This approval, called a "certificate of authority," focuses upon a project's impacts to a utility's ratepayers. It does not generally address issues of facility siting. [[s. 196.49\(3\)\(b\), Stats.](#)]

² Additional criteria for CPCN review are enumerated in [s. 196.491\(3\)\(d\), Stats.](#)

a wholesale merchant plant does not consider alternative sources of supply, nor economic and engineering factors under [s. 196.491 \(3\) \(d\) 3., Stats.](#) Similarly, the review does not evaluate the project's cost to ratepayers nor whether the facility is necessary to satisfy the public's energy needs. [[s. 196.491 \(3\) \(d\) 2.](#) and [5., Stats.](#)] In lieu of these considerations, the PSC considers the facility's cost to Wisconsin utilities and ratepayers when the facility's output (or the facility itself) is purchased by a Wisconsin utility.

The unique treatment of wholesale merchant plants is a product of [1997 Wisconsin Act 204](#), which first allowed the construction of these plants in Wisconsin.³ Prior to the act, the state's review process for generation facilities generally required the PSC to determine that a project would satisfy the public's need for additional electricity supply. This effectively prohibited many wholesale merchant plants because IPPs may sell electricity to customers outside of Wisconsin, where the PSC is generally unable to determine the need for additional supply.

Public Participation in PSC Review

To assist in the PSC's evaluation of the CPCN criteria under [s. 196.491 \(3\) \(d\), Stats.](#), members of the public are afforded various opportunities to participate in the project review process. Notably, people may provide input at PSC scoping sessions, through technical or public hearings, or by submitting written comments to the commission.^{4, 5}

Scoping Sessions

After an application for a CPCN is submitted, the PSC often prepares an environmental assessment (EA) to evaluate a project's potential environmental effects.⁶ [[s. PSC 4.20 \(1\), Wis. Adm. Code.](#)] When beginning an EA, the PSC sends letters notifying interested individuals, area legislators, local governments, and local media. [[s. PSC 4.20 \(1m\), Wis. Adm. Code.](#)] The PSC often holds "scoping sessions" in the project area, providing an opportunity for individuals to provide input regarding the project and its environmental impact.⁷

Public and Technical Hearings

Commonly, interested members of the public will provide input on a CPCN application by testifying at a public hearing held in the project area. The comments provided at a public hearing are entered into the record for consideration by the PSC commissioners when they make their decision regarding a CPCN.⁸

³ In general, 1997 Wisconsin Act 204 aimed to promote electric reliability and represented a shift towards relying on competitive market forces to drive the construction of new power plants. This contrasted with the approach under prior law, under which the PSC evaluated the need for new plants through a more centralized planning process.

⁴ A CPCN applicant may also hold public information meetings to obtain input prior to submitting a CPCN application.

⁵ Further information on public participation in PSC proceedings is available at: <https://psc.wi.gov/Pages/Regulatory/GuideToPSCProceedings.aspx> and <https://psc.wi.gov/Documents/SmithPublicParticipation2018.pdf>.

⁶ Under [s. PSC 4.10 \(3\), Wis. Adm. Code](#), the construction of a solar generation facility does not normally require an EA. However, the PSC may evaluate a particular proposal and determine that an EA is warranted. In practice, the PSC typically requires preparation of an EA for large solar generation facilities.

⁷ An EA includes a determination of whether an environmental impact statement (EIS) is necessary under [s. 1.11, Stats.](#) If an EIS is prepared, members of the public may comment on the draft EIS during a 45-day comment period. [[s. PSC 4.30 \(4\) \(e\) 1., Wis. Adm. Code.](#)] However, the EAs prepared for large solar generation facilities have typically determined that an EIS is not required.

⁸ Further information on participation in PSC public hearings is available at: <https://psc.wi.gov/Pages/Regulatory/publicHearing.aspx>.

If a person is interested in participating in a PSC proceeding in a more formal manner, they may apply to be admitted as a party to a technical hearing. A technical hearing (also called a party hearing or a contested case hearing) is a trial-like administrative hearing that involves testimony from admitted parties. To participate in a technical hearing, an individual generally must be admitted as an “intervenor.” There are two ways that a person may intervene in a PSC proceeding:

- Under intervention by right, a person whose substantial interests may be affected by the PSC’s action or inaction in a proceeding must be admitted an intervenor. [[s. PSC 2.21 \(1\), Wis. Adm. Code.](#)]
- Under permissive intervention, a person may be granted party status if the person’s participation will likely promote the proper disposition of the issues to be determined in the proceeding. [[s. PSC 2.21 \(2\), Wis. Adm. Code.](#)]

There are various factors a person may consider in deciding whether to become an intervenor. Importantly, intervenors must comply with PSC procedural requirements and may be subject to discovery and cross-examination. However, intervenors are also eligible for compensation to help cover certain costs incurred as a result of participating in a PSC proceeding.⁹

Written Comments

In lieu of providing testimony at a public or technical hearing, members of the public may submit written comments electronically or by mail. Instructions on filing comments and the comment filing deadline are included in the notice issued for the public and technical hearings held for a given proceeding. As with comments provided at the hearings, written comments are entered into the record for consideration by the PSC commissioners.

DNR REVIEW OF GENERATION FACILITIES

In addition to regulation by the PSC, solar generation facilities often require various approvals from the DNR. As illustrated in the flowchart on pages 6-8, Wisconsin law generally integrates the DNR’s review of a proposed facility with the PSC’s CPCN review process.

The types of DNR approvals required for a solar generation facility depend upon the nature of a given project. For example, facilities often require permits from the DNR for construction in waterways and wetlands, pursuant to [ch. 30](#) and [s. 281.36, Stats.](#) Additionally, projects are typically subject to construction site erosion control and storm water management requirements established under [s. 283.33, Stats.](#) Finally, a project may also require an Endangered Resources Review to evaluate its impacts on species protected under the state endangered species law. [[s.29.604, Stats.](#)] Specific information related to DNR approvals for a given project may be found in the project’s docket on the PSC website.

LOCAL REGULATION OF SOLAR GENERATION FACILITIES

State law generally limits the extent to which local governments may restrict the development of solar generation facilities. In particular, [s. 66.0401 \(1m\), Stats.](#), provides that no political subdivision may place any restriction, either directly or in effect, on the installation or use of a solar or wind energy system, unless the restriction satisfies one of the following conditions:

- The restriction serves to preserve or protect the public health or safety.

⁹ Further information on intervenor compensation is available at:
<https://psc.wi.gov/Pages/Programs/IntervenorComp.aspx>.

- The restriction does not significantly increase the cost of the system or significantly decrease its efficiency.
- The restriction allows for an alternative system of comparable cost and efficiency.

Notably, the Wisconsin Court of Appeals interpreted this provision to disfavor local authority over wind energy systems. Specifically, the court determined that the restrictions allowed under [s. 66.0401 \(1m\), Stats.](#), require a case-by-case approach. A local unit of government may not promulgate an ordinance that sets a “one size fits all” regulatory scheme.¹⁰ [*Ecker Brothers v. Calumet Cnty.*, 2009 WI App 112.] While this court decision pertained to local restrictions on wind energy development, a court may apply similar logic to disfavor restrictions on solar energy systems that do not take a case-by-case approach.¹¹

In addition to the above, local regulations on solar generation facilities may be preempted by the PSC’s issuance of a CPCN. Specifically, [s. 196.491 \(3\) \(i\), Stats.](#), provides that if a local ordinance precludes or inhibits the installation or use of a facility for which a CPCN has been granted, the installation or use of the facility may nevertheless proceed.

¹⁰ Subsequent to the Wisconsin Court of Appeals’ decision, [2009 Wisconsin Act 40](#) amended [s. 66.0401 \(1m\), Stats.](#) While preserving the limits on local authority described above, the act specifically prohibited political subdivisions from placing restrictions on wind energy systems that are more restrictive than wind siting rules promulgated by the PSC. The act did not address limits on local authority over solar energy systems.

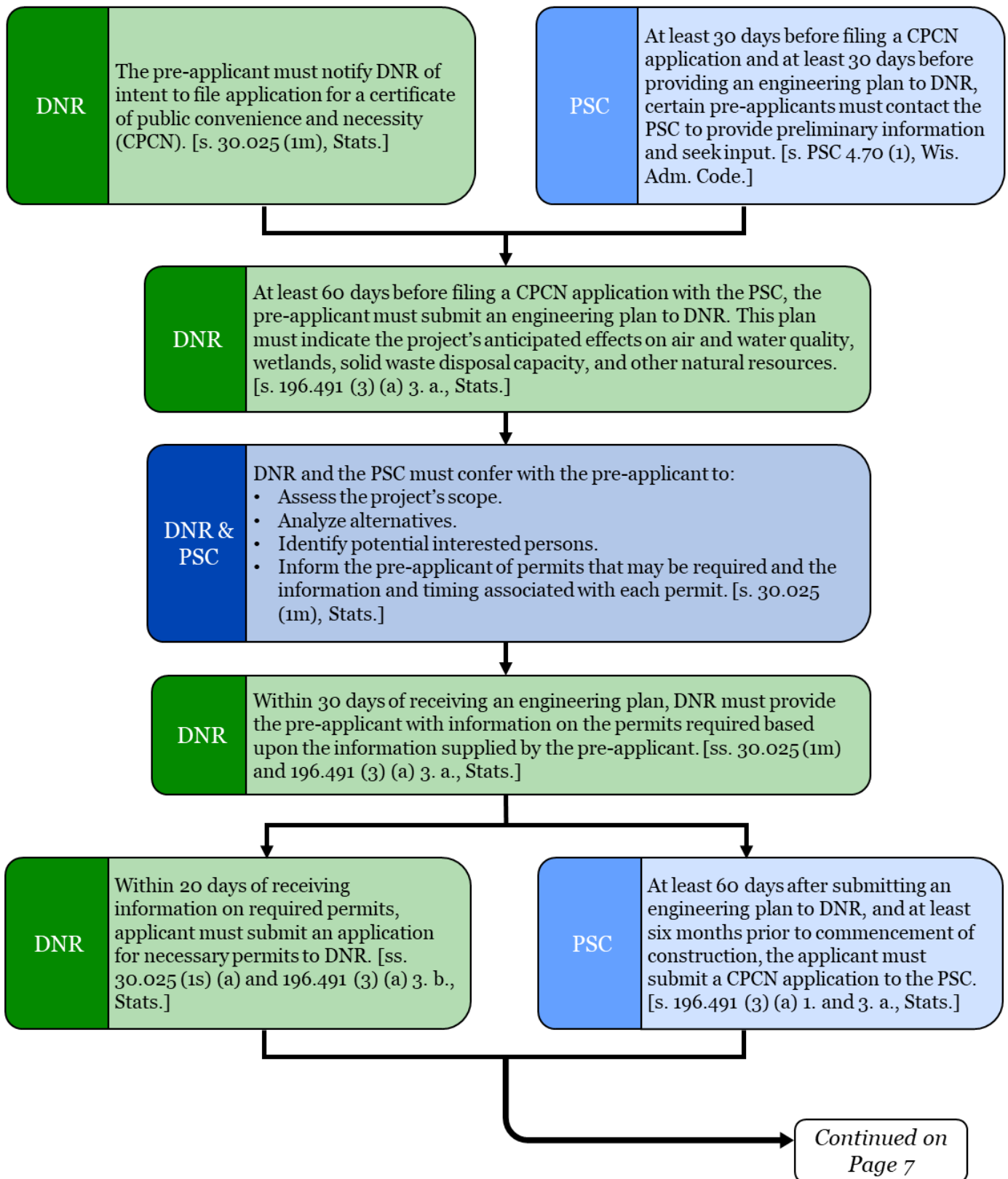
¹¹ As a matter of practice, various local governments have entered into “local operating contracts” or “joint development agreements” with solar developers to establish requirements relating to solar energy projects. These agreements have included provisions establishing setbacks and visual screening requirements. Additionally, the agreements have included commitments on the behalf of solar developers to provide financial assurance (e.g., cash, a bond, or a letter of credit) to cover costs associated with decommissioning solar facilities in the future. Examples of agreements for the Badger Hollow Solar Farm and the Apple River Solar Project may be found in [PSC REF# 3.56870](#) and [PSC REF# 411975](#), respectively.

LARGE SOLAR GENERATION FACILITIES IN WISCONSIN

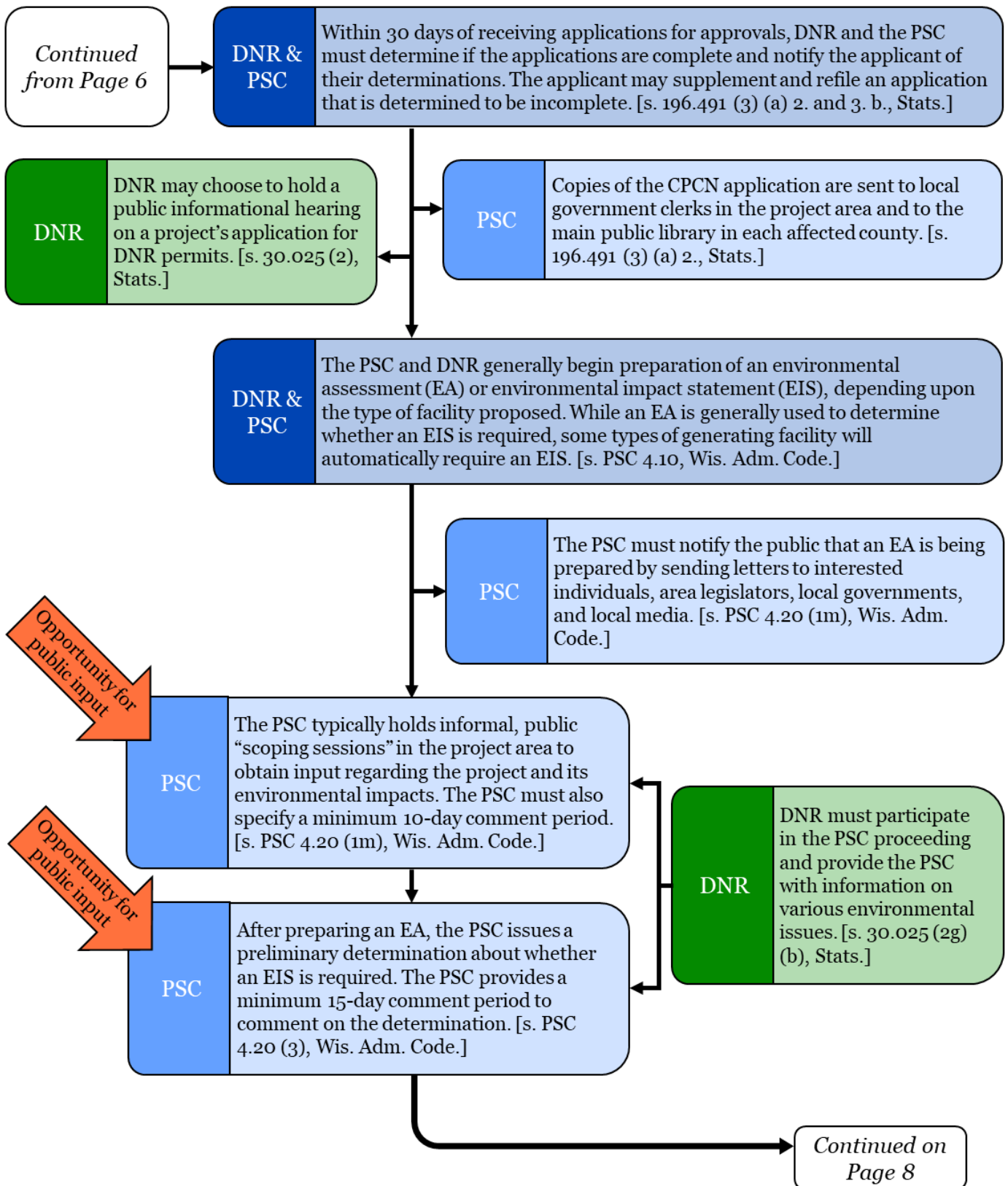
The table below details solar generation facilities in various stages of development across Wisconsin. It only includes facilities requiring a CPCN and is not intended to be comprehensive. Further information relating to each project may be found in each project's PSC docket.

Project Name	Location	Status	PSC Docket
Two Creeks Solar	Manitowoc and Kewaunee Counties	CPCN application approved April 2019	9696-CE-100
Badger Hollow Solar Farm	Iowa County	CPCN application approved April 2019	9697-CE-100
Badger State Solar	Jefferson County	CPCN application approved February 2020	9800-CE-100
Paris Solar	Kenosha County	CPCN application approved December 2020	9801-CE-100
Point Beach Solar	Manitowoc County	CPCN application approved February 2021	9802-CE-100
Wood County Solar	Wood County	CPCN application approved March 2021	9803-CE-100
Grant County Solar	Grant County	CPCN application approved May 2021	9804-CE-100
Onion River Solar	Sheboygan County	CPCN application approved June 2021	9805-CE-100
Darien Solar Energy Center	Rock and Walworth Counties	CPCN application approved August 2021	9806-CE-100
Springfield Solar Project	Dodge County	CPCN application filed October 2020	9807-CE-100
Apple River Solar	Polk County	CPCN application filed October 2020	9808-CE-100
Koshkonong Solar Energy Center	Dane County	CPCN application filed April 2021	9811-CE-100
Silver Maple Solar	Fond du Lac and Winnebago Counties	Engineering plan filed September 2021	9813-CE-100
Sunrise Solar	Rock County	Early development, no engineering plan filed	9809-CE-100
Portage Solar	Portage County	Early development, no engineering plan filed	9810-CE-100
High Noon Solar	Columbia County	Early development, no engineering plan filed	9814-CE-100
Great Dane Solar	Dane County	Early development, no engineering plan filed	N/A

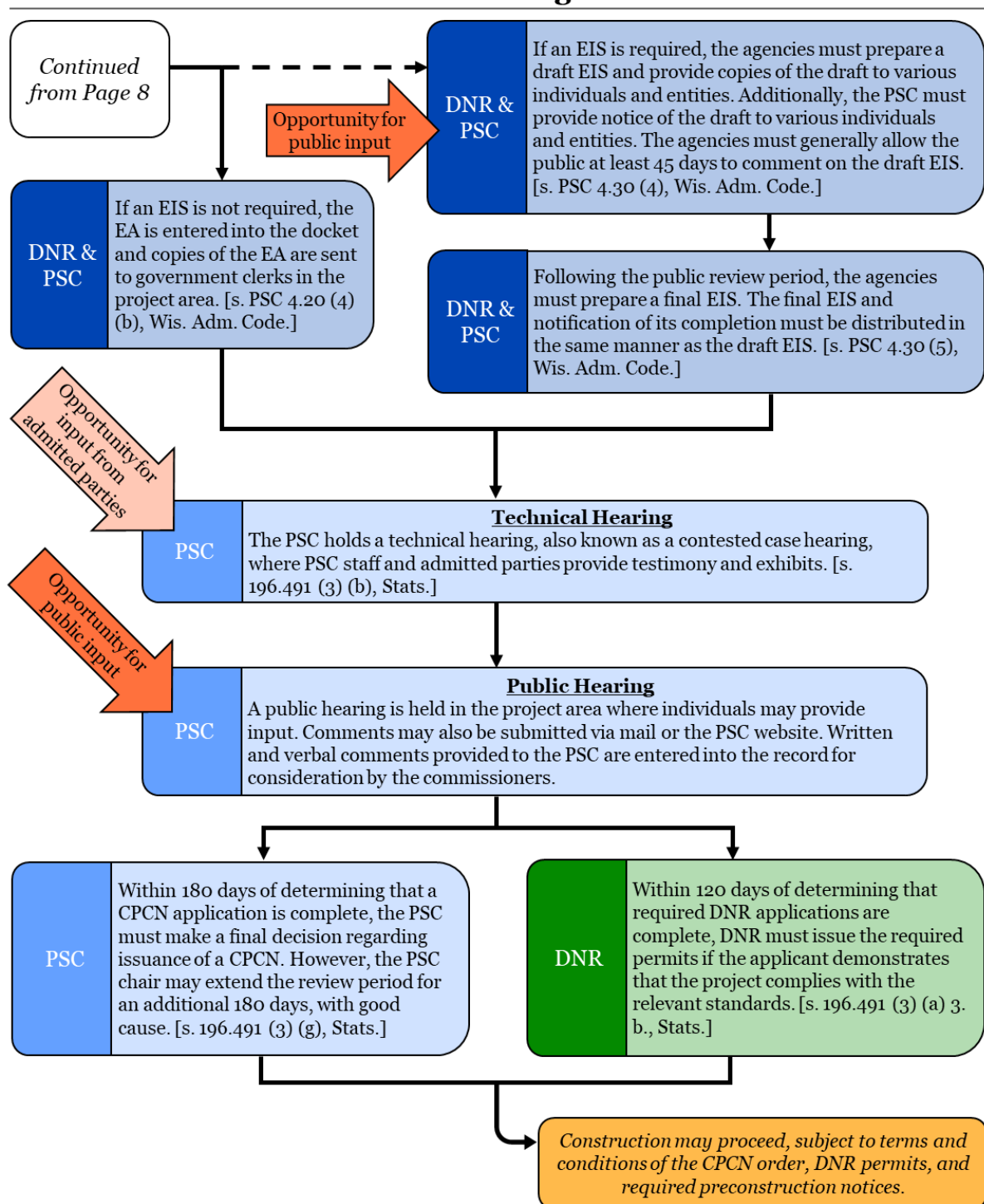
Overview of the PSC and DNR Permitting Process for Large Electric Generating Facilities



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This information memorandum was prepared by Benjamin Kranner, Staff Analyst, on October 15, 2021.